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INVITED COMMENTARY

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The authors report a retrospective study undertaken in an effort to characterize the natural history of catheter-associated upper extremity deep venous thrombosis (CAUEDVT). The findings, although interesting and intriguing, should be interpreted cautiously. The data indicate that 46% of the patients with CAUEDVT had documented resolution of thrombus on follow-up studies. Life-table analysis projected resolution in 73% of patients at 24 months. The incidence of resolution was significantly decreased when the catheter was not removed, whereas anticoagulation did not affect the rate of resolution.

These data, however, may have been influenced by patient selection. The study was limited to symptomatic patients with follow-up ultrasound evaluation. Results cannot be extrapolated to patients with asymptomatic CAUEDVT. The acuity of thrombus was presumed from clinical presentation alone; characteristics of the ultrasound examination were not used to distinguish acute and chronic thrombus. The number of follow-up studies per patient was small (1.76) and may have been selectively obtained based on the recurrence of symptoms or the need for additional access. There was no formal follow-up protocol, and the time-frame for follow-up studies varied from 1 day to 7.9 years, with one to 10 studies per patient. As a result, the data presented in the life-table format may not accurately reflect the course of thrombus resolution.

On the basis of their identified incidence of pulmonary embolism (5%), bleeding complications on anticoagulation (25.8%), and the observation that anticoagulation did not influence thrombus resolution, the authors have questioned the utility of anticoagulation in patients with CAUEDVT. Although the recommendations of this study challenge current conventions,[1] the following should be considered. Anticoagulation was not managed in a standardized fashion, with identified therapeutic targets; the frequency of therapeutic outliers was not reported. The incidence of bleeding in this study was high (25.8%) compared with other reported studies. Outcomes from the REITE initiative (Registro Informatizado de la Enfermedad TromboEmbolica [Computerized Registry of Patients With Venous Thromboembolism], a registry of 17,368 consecutive patients with objectively confirmed, symptomatic DVT, demonstrated an overall 2.3% incidence of major bleeding in patients with DVT.[2] Of the 512 patients with upper extremity DVT, the incidence of major bleeding was only 2.1%; those with CAUEDVT had a 3.1% incidence of major bleeding.[3]

The exact incidence of pulmonary embolism associated with CAUEDVT in this series is uncertain because some patients also had lower extremity DVT. The reported incidence varies. Monreal et al[4] reported a 16% incidence of pulmonary embolism identified by V/Q scan ≤24 hours of the CAUEDVT diagnosis. Munoz et al[3] reported that 9% of patients with arm DVT had a clinically overt pulmonary embolism on presentation; but only a 1.8% recurrence after 3 months of follow-up. Other series have reported a frequency of 15% to 50% in patients with CAUEDVT.[5]

The study is challenging and arrives at some intriguing conclusions. On the basis of the variability of reported data and protocols, however, I suspect that these findings should provide the impetus for further prospective evaluations of the natural history and management of CAUEDVT rather than drive therapeutic change.

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